AMENDMENT

In the Claims:

The following listing of claims replaces all previous listings or versions thereof:

1. (Currently amended) A method of modifying a biological molecule by formation of a C--O bond[[,]] comprising the ~~steps~~step of contacting a biological molecule ~~which is a substrate for~~with a polypeptide selected from the group consisting of: (a) a polypeptide ~~consisting of~~comprising ~~an~~the amino acid sequence set forth in SEQ ID NO: 3; (b) a polypeptide encoded by a nucleic acid ~~consisting of a~~comprising the nucleotide sequence set forth in SEQ ID NO[[.]]: 2; and (c) a polypeptide encoded by a nucleic acid that specifically hybridizes under highly stringent conditions to SEQ ID NO: 2 and ~~capable of~~catalyzes C--O bond formation; ~~with said polypeptide~~wherein said biological molecule is a substrate for said polypeptide, and whereby said polypeptide modifies the biological molecule by formation of a C--O bond.

2. (Currently amended) [[A]]The method according to claim 1, further comprising the step of contacting the biological molecule modified by the polypeptide recited in claim 1 with a second polypeptide selected from the group consisting of: (a) a polypeptide ~~consisting of an~~comprising the amino acid sequence set forth in SEQ ID NO: 5; (b) a polypeptide encoded by a nucleic acid ~~consisting of a~~comprising the nucleotide sequence set forth in SEQ ID NO: 4; and (c) a polypeptide encoded by a nucleic acid that specifically hybridizes under moderately stringent conditions to SEQ ID NO: 4 and ~~capable of~~catalyzes C--O bond formation; whereby said second polypeptide further modifies the biological molecule by formation of a C--O bond.

3. (Currently amended) [[A]]The method according to claim 1, wherein the C--O bond formed is between the biological molecule and a second biological molecule, said second biological molecule also a substrate for the polypeptide.

4. (Currently amended) [[A]]The method according to claim 1, wherein said contacting ~~is~~occurs in a host cell.

5. (Currently amended) [[A]]The method according to claim 4, wherein said host cell is a bacterium.

6. (Currently amended) [[A]]The method according to claim 4, ~~where~~wherein the host cell is a eukaryotic cell selected from the group consisting of a mammalian cell, a yeast cell, a plant cell, a fungal cell, and an insect cell.

7. (Currently amended) [[A]]The method according to claim 4, wherein said biological molecule is ~~an~~ exogenously supplied ~~substrate~~.

8. (Currently amended) [[A]]The method according to claim 1, wherein the contacting is *ex vivo*.

9. (Currently amended) [[A]]The method according to claim 1, wherein said ~~method produces a macrotetralide or a macrotetralide analogue~~biological molecule is an enantiomeric nonactin or analog thereof.

10. (Currently amended) A method of catalyzing a C--O bond between biological molecules[[,]] comprising the ~~steps~~step of contacting biological molecules ~~which are substrates for~~with at least one polypeptide ~~capable of catalyzing C--O bond formation between said biological molecules and~~ encoded by a nucleic acid comprising the sequence set forth in SEQ ID NO: 1, or by a nucleic acid hybridizing under stringent conditions thereto, ~~with said polypeptide~~ said biological molecules being substrates for said at least one polypeptide, whereby said polypeptide catalyzes C--O bond formation between the biological molecules.

11. (Currently amended) [[A]]The method according to claim 10, wherein said contacting is in a host cell.

12. (Currently amended) **[[**A**]]**The method according to claim 11, wherein said host cell is a bacterium.

13. (Currently amended) **[[**A**]]**The method according to claim 11, wherein said host cell is a eukaryotic cell selected from the group consisting of a mammalian cell, a yeast cell, a plant cell, a fungal cell, and an insect cell.

14. (Currently amended) **[[**A**]]**The method according to claim 11, wherein at least one of said biological molecules is an exogenously supplied substrate.

15. (Currently amended) **[[**A**]]**The method according to claim 10, wherein the contacting is *ex vivo*.

16. (Currently amended) **[[**A**]]**The method according to claim 10, wherein said ~~method produces a macrotetralide or a macrotetralide analogue~~biological molecule is an enantiomeric nonactin or analog thereof.

17. (Currently amended) A method of producing a macrotetralide or a macrotetralide analogue**[[**,**]]** comprising the steps of (i) contacting ~~biological molecules that are substrates for~~enantiomeric nonactins or analogs thereof with at least one polypeptide selected from the group consisting of: (a) a polypeptide ~~consisting of an~~comprising the amino acid sequence set forth in SEQ ID NO: 3 or 5; (b) a polypeptide encoded by a nucleic acid ~~consisting of a~~comprising the nucleotide sequence set forth in SEQ ID NO: 2 or 4; and (c) a polypeptide encoded by a nucleic acid that specifically hybridizes under very stringent conditions to SEQ ID NO: 2 or 4 and ~~capable of~~catalyzes C--O bond formation; ~~with said polypeptide~~ under conditions such that the polypeptide catalyzes a C--O bond formation between the ~~biological molecules~~enantiomeric nonactins or analogs thereof, ~~and~~whereby a macrotetralide or macrotetralide analogue is thereby synthesized; and (ii) recovering said macrotetralide or macrotetralide analogue.

18. (Currently amended) **[[**A**]]**The method according to claim 17, wherein said method is carried out in a host cell and ~~at least one biological molecule is an~~the enantiomeric nonactins or analogs thereof are exogenously supplied ~~substrate~~.

19. (Withdrawn) A method of preparing a hybrid enzyme comprising the step of positioning in a hybrid enzyme at least one catalytic domain capable of catalyzing C--O bond formation between biological molecules, said catalytic domain encoded by a polypeptide selected from the group consisting of: (a) a polypeptide encoded by an amino acid sequence set forth in SEQ ID NO. 3 or 5; (b) a polypeptide encoded by a nucleic acid comprising nucleotide sequence set forth in SEQ ID NO. 2 or 4; (c) a polypeptide encoded by a nucleic acid that specifically hybridizes under stringent conditions to SEQ ID NO. 2 or 4 and capable of C--O bond formation.

20. (Withdrawn) A method of preparing a megasynthetase comprising the step of positioning in a megasynthetase at least one module including a polypeptide capable of catalyzing C--O bond formation between biological molecules, said polypeptide selected from the group consisting of: (a) a polypeptide encoded by an amino acid sequence set forth in SEQ ID NO. 3 or 5; (b) a polypeptide encoded by a nucleic acid comprising nucleotide sequence set forth in SEQ ID NO. 2 or 4; and (c) a polypeptide encoded by a nucleic acid that specifically hybridizes under stringent conditions to SEQ ID NO. 2 or 4 and capable of C--O bond formation.

21. (Currently amended) A method of catalyzing C--O bond formation between biological molecules**[[**,**]]** comprising ~~steps~~the step of contacting biological molecules ~~that are substrates for~~with a polypeptide selected from the group consisting of: (a) a polypeptide ~~consisting of a~~comprising the amino acid sequence set forth in SEQ ID NO: 3; (b) a polypeptide encoded by a nucleic acid ~~consisting of a~~comprising the nucleotide sequence set forth in SEQ ID NO: 2; and (c) a polypeptide encoded by a nucleic acid that specifically hybridizes under very stringent conditions to SEQ ID NO: 2 and ~~capable of~~catalyzes C--O bond formation; ~~with said polypeptide~~wherein said biological

molecules are substrates for said polypeptide, whereby said polypeptide catalyzes C--O bond formation between the biological molecules.

22. (Currently amended) **[[**A**]]**The method according to claim 21, wherein said method is performed in a host cell and at least one of the biological molecules is an exogenously supplied substrate.

23. (Currently amended) A method of catalyzing C--O bond formation between biological molecules**[[**,**]]** comprising ~~steps~~the step of contacting biological molecules ~~that are substrates for~~with a polypeptide selected from the group consisting of: (a) a polypeptide ~~consisting of an~~comprising the amino acid sequence set forth in SEQ ID NO: 5; (b) a polypeptide encoded by a nucleic acid ~~consisting of a~~comprising the nucleotide sequence set forth in SEQ ID NO: 4; and (c) a polypeptide encoded by a nucleic acid that specifically hybridizes under moderately stringent conditions to SEQ ID NO: 4 and ~~capable of~~catalyzes C--O bond formation; ~~with said polypeptide~~wherein said biological molecules are substrates for said polypeptide, whereby said polypeptide catalyzes C--O bond formation between the biological molecules.

24. (Currently amended) **[[**A**]]**The method according to claim 23, wherein said method is performed in a host cell and at least one of the biological molecules is an exogenously supplied substrate.

25. (Currently amended) A method of chemically modifying a biological molecule by formation of a C--O bond**[[**,**]]** comprising contacting a biological molecule ~~that is a substrate for~~with a polypeptide selected from the group consisting of: (a) a polypeptide ~~consisting of a~~comprising the amino acid sequence set forth in SEQ ID NO: 3 or 5; (b) a polypeptide encoded by a nucleic acid ~~consisting of a~~comprising the nucleotide sequence ~~identical to or isolated from~~of SEQ ID NO: ~~1,~~2 or 4; ~~(c) a polypeptide encoded by a nucleic acid encoding an amino acid sequence set forth in SEQ ID NO: 3 or 5;~~ and (**[[**d**]]**c) a polypeptide encoded by a nucleic acid that specifically hybridizes under moderately stringent conditions to SEQ ID NO: ~~1,~~2 or 4; ~~with said polypeptide~~wherein

said biological molecule is a substrate for said polypeptide, whereby said polypeptide chemically modifies the biological molecule by formation of a C--O bond.